

REMARKS

This application pertains to a novel antistatic pressure-sensitive adhesive tape.

Claims 16-26 are pending.

Claims 17-26 stand rejected under 35 U.S.C. 112, second paragraph, because as previously presented they depended from a cancelled independent claim. The claims have now been amended to provide for proper dependency, and the rejection should be withdrawn.

Claims 16-19 and 23-25 stand rejected under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371).

Wallner's pressure-sensitive adhesive tapes are *transparent* and incorporate antistatic primers which do not interfere with this transparency. At col. 1, lines 34-39, Wallner teaches that:

Antistatic primers can be used which do not interfere with the desired transparency of transparent tape constructions, and in fact the presence of the antistatic primer may be undetectable upon ordinary visual inspection due to its thinness and transparency.

Wallner's antistatic primers are normally insulating primer compositions which are blended with antistatic polymers (col. 2, lines 22- 27).

Wallner, as the Examiner acknowledges, also teaches to avoid incorporating antistatic agents into the adhesive layer itself, because this would result in an inferior adhesive (col. 1, lines 58-59).

Although the Examiner contends it is irrelevant, it is very relevant that Wallner teaches that it is not apparent why his primer layer avoids the normal problems of static electricity (col. 1, lines 62-68) because the primer layer is sandwiched between a film layer and an adhesive layer, both of which are of a highly insulating dielectric nature.

Those skilled in the art would also find this surprising, as those skilled in the art would expect that in order to relieve a static electric charge, one would need a path of conductive material to convey the electricity out of the film. In Wallner's construction, no such conductive path is apparent, since the primer layer is sandwiched between two insulating layers. Those skilled in the art would have expected that the conductive primer layer would have to be in contact with another conductive layer in order to conduct the electric charge out of the adhesive tape.

Those skilled in the art would therefore conclude that this surprising functionality of Wallner's conductive primer has something to do with Wallner's use of conductive polymers.

That those skilled in the art would have expected that a conductive primer layer would have to be in contact with another conductive layer in order to conduct the electricity out of the adhesive tape is clearly reinforced by the Akhter reference cited by the Examiner.

Akhter teaches a primer layer having conductive particles homogeneously dispersed therein, and an adhesive layer having conductive particles which extend from a first surface of the adhesive layer to a second surface of the adhesive layer in intimate and binding contact with the surface of the primer layer (col. 2, lines 13-18). This arrangement is illustrated in Akhter's figure, in which conductive particles 5 span the width of adhesive layer 4 and serve as conductive bridges from between open surface 6 and conductive primer 3 (col. 5, lines 2-5).

Those skilled in the art reading Akhter would clearly understand that in order for the conductive primer layer 3 to dissipate static electrical charges out of the adhesive tape conductive particles would have to be present in the adhesive layer 3 to form a conductive bridge through which the electrical charge could be conducted out of the film.

No person skilled in art reading Akhter and Wallner would therefore attempt to substitute Akhter's particles for Wallner's conductive polymers without also including conductive particles in the adhesive. The clear lesson of Akhter is that a conductive bridge through the adhesive layer would be required to transmit the static electricity

from the primer layer to the outer surface of the adhesive tape.

Those reading the Akhter reference would understand the mechanism by which Akhter's conductive materials dissipate static electricity. Those reading Wallner, even Wallner himself, would not understand how Wallner's conductive polymers dissipate electricity out of the primer layer without a conductive bridge through the adhesive layer (see Wallner, col. 1, lines 62-68), and would therefore have no reasonable expectation that the substitution of Akhter's conductive particles for the conductive polymers in Wallner's primer layer would dissipate the static electricity without also providing Akhter's conductive bridges through the adhesive.

Accordingly, those skilled in the art wishing to avoid adding conductive particles to the adhesive layer because of Wallner's teaching that such an addition would result in an inferior adhesive, would have no reason to add conductive particles to the primer layer because it would be understood that conductive particles in the primer layer would be useless in the absence of conductive particles bridging the adhesive layer to conduct electricity from the particles in the primer layer, through the adhesive layer, and out of the adhesive tape.

The Examiner contends that:

"...it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the electrically conductive particles as required by claims 16, 17 and 23-25 as taught by Akhter in the primer layer of Wallner, because selecting a known material based on its suitability for its intended use establishes a *prima facie* case of obviousness."

The Examiner is not correct. It would clearly be obvious **not to use conductive particles as taught by Akhter in the primer layer of Wallner**, because Akhter's conductive particles are not suitable for Wallner's use. Akhter's conductive particles would have to be used together with conductive particles in the adhesive layer, which Wallner avoids. Wallner has found a way to dissipate the electrical charge out of the primer layer without the need for conductive particles forming a conductive bridge through the adhesive. The Examiner's proposition does not constitute the use of a known material based on its suitability for the intended purpose, because Akhter's conductive particles would not be expected to be suitable for the intended purpose in the absence of conductive particles in the adhesive layer as well. More to the point, Akhter's conductive particles have not been shown to be useful for the intended purpose of Wallner, which is to dissipate static electricity from the adhesive tape without the need for any conductive particles in the adhesive layer itself.

Furthermore, it will be apparent to those skilled in the art that, while Wallner's adhesive tapes are *transparent*, the substitution for conductive particles for Wallner's conductive particles would interfere with this transparency, and be contrary to Wallner's teaching. Wallner specifically relates to antistatic primers which do not interfere with his desired transparency (col. 1, lines 34-39). A primer loaded with conductive **particles** would be expected by those skilled in the art to be less transparent than it would be without such particles, or not transparent at all.

No person skilled in the art reading Wallner and Akhter would therefore ever attempt to substitute Akhter's conductive particles for Wallner's conductive polymers, for the reasons discussed above.

The Examiner cites Roeder as evidence that polyacrylates are elastomers. This, however, would not overcome the differences between Applicants' invention and anything that could be derived from the Wallner/Akhter combination of references, as discussed above. Moreover, the Examiner's argument that Roeder provides evidence that polyacrylates are elastomers, and that therefore Wallner's PSAs would exhibit a shrinkback is not correct. The mere fact that Wallner's PSAs include polyacrylates does not mean that Wallner's PSAs exhibit shrinkback.

Furthermore, whether a polymer is an elastomer or not depends on the state of crosslinking. If it is not crosslinked at all, it will just "flow away". If the degree of crosslinking is in a particular range, it will be elastomeric. If the polymer has many functional groups that are able to serve as crosslinking centers and the degree of crosslinking is very high, the polymer will become very hard, and the elastomeric properties will approach zero and will not even be detectable.

Applicants' polyacrylate PSAs are viscoelastic systems, which means that they are somewhat viscous and somewhat elastic at the same time. There are, of course, many heat activatable polyacrylate systems which are thermoplastic (which means not elastic at all) or curable (which leads to non-elastic systems as well after curing).

Therefore the Examiner's comment that polyacrylates are elastomers is not correct, in the absence of further details about the particular polymer.

Accordingly, Applicants' novel antistatic pressure sensitive adhesive tape cannot fairly be seen as obvious over the Wallner/Akhter/Roeder combination of references, and the rejection of claims 16-19 and 23-25 under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371) should now be withdrawn.

Claims 20 and 21 stand rejected under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371) and further in view of Kitamura et al. (US 5,759,679).

The differences between Applicants' antistatic pressure sensitive adhesive tape and anything that can be learned from the Wallner/Akhter/Roeder combination of references are discussed above. The Examiner relies on Kitamura for a teaching of a particular structure of a PSA tape.

However, no particular structure, i.e., sequence of layers, can compensate for the failure of the Wallner/Akhter/Roeder combination of references to teach or suggest anything at all about a pressure sensitive adhesive having a primer between the backing and the adhesive, where the primer, but not the adhesive, comprises electrically conductive particles.

The rejection of claims 20 and 21 under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of Kitamura et al (US 5,759,679) should therefore now be withdrawn.

Claim 22 stands rejected under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of Lühmann et al. (US 6,395,389).

The differences between Applicants' antistatic pressure sensitive adhesive tape and anything that can be learned from the Wallner/Akhter/Roeder combination of references are discussed above. The Examiner relies on Lühmann for a teaching of a punched adhesive tape strip.

A punched tape strip cannot in any way overcome the failure of the Wallner/Akhter/Roeder combination of references to teach or suggest anything at all about a pressure sensitive adhesive having a primer between the backing and the adhesive, where the primer, but not the backing or adhesive, comprises electrically conductive particles.

Accordingly, the rejection of claim 22 under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder

(US 3,672,371), as applied to claim 1 above, and further in view of Lühmann et al. (US 6,395,389) should now be withdrawn.

Claims 24 and 25 stand rejected under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of Craig et al. (US 6,299,799).

The differences between Applicants' antistatic pressure sensitive adhesive tape and anything that can be learned from the Wallner/Akhter/Roeder combination of references are discussed above. The Examiner relies on Craig for a ceramer composition comprising an electrically conductive polymer.

The Examiner contends that it would be obvious to use the electrically conductive particles including electrically conductive polymers of Akhter in the amount taught by Craig.

However, there is nothing in Craig that would teach or suggest anything that would overcome the teaching of Akhter which requires conductive particles in both the adhesive layer and the primer layer, and nothing in Craig would lead those skilled in the art to add conductive particles to the primer layer without also adding them to the PSA layer.

Accordingly, no combination of Wallner, Akhter, Roeder, and Craig could ever lead to Applicants' novel antistatic pressure-sensitive adhesive tape, and the rejection of claims 24 and 25 under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of Craig et al. (US 6,299,799) should now be withdrawn.

Claim 26 stands rejected under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of De Jonge et al. (US 6,284,837).

The differences between Applicants' antistatic pressure sensitive adhesive tape and anything that can be learned from the Wallner/Akhter/Roeder combination of references are discussed above. The Examiner relies on De Jonge for a polymethacrylate PSA. No polymethacrylate PSA could possibly overcome the differences discussed above, and the rejection of claim 26 under 35 U.S.C. 103(a) as obvious over Wallner (US 3,146,882) in view of Akhter (US 5,958,537), and as evidenced by Roeder (US 3,672,371), as applied to claim 1 above, and further in view of De Jonge et al. (US 6,284,837) should now be withdrawn.

In view of the present amendments and remarks it is believed that claims 16 - 26 are now in condition for allowance. Reconsideration of said claims by the Examiner is

respectfully requested and the allowance thereof is courteously solicited. Should the Examiner not deem the present amendment and remarks to place the instant claims in condition for allowance, it is respectfully requested that this Amendment Under Rule 116 be entered for the purpose of placing the prosecution record in better condition for appeal.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,  
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